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Motor Vehicle Crashes among the Elderly, 1994 - 1998

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National data show that there is an increasing number of licensed drivers ages 70 and older. Between 1987 and 1997, the most recent year for which data are available, the number of older drivers rose 45%.[1] There has been a corresponding increase in the number of older drivers involved in fatal crashes. Nationally, over the ten years ending in 1998, the number of drivers age 70 or older involved in such crashes increased 33%, compared to a decrease of 12% among those under age 70.[1] In this analysis, recent Rhode Island data on motor vehicle deaths and hospitalizations among the elderly are presented.

Methods. Deaths of state residents with an underlying cause of death listed as motor vehicle traffic crashes were tabulated from the Rhode Island death certificate file for the period 1987 – 1998. (Data for 1996-1998 do not include all out-of-state deaths of Rhode Island residents and are therefore provisional data.) Inpatient stays in the state's acute care hospitals due to motor vehicle injuries were similarly tabulated from the statewide hospital discharge data system for the period October 1, 1993 – September 30, 1998, corresponding to hospital fiscal years 1994 through 1998. For both deaths and hospitalizations, persons injured in motor vehicle crashes who were not occupants of passenger cars and trucks (e.g., pedestrians, motorcyclists, and persons riding other vehicles) were excluded from the analysis. Rates were computed using population estimates for Rhode Island obtained from the Bureau of the Census.

Results. During the five-year period 1994 – 1998, there were 279 deaths of Rhode Island residents due to motor vehicle crashes in which they were drivers or passengers. Of these, 17 (6.1%) were persons ages 70 and older. Similarly, during the five-year period consisting of hospital fiscal years 1994 - 1998, 3,121 persons were hospitalized in Rhode Island due to injuries suffered in motor vehicle crashes in which they were drivers or passengers. Of these, 458 (14.7%) were persons ages 70 and older.

The death rate for motor vehicle occupants was highest for persons ages 15-69, followed by those ages 70 and older and those under age 1 5. (Figure 1) The rate of hospitalization for injuries caused by motor vehicles was highest for persons ages 70 and older, for whom the rate was 8% higher than for persons ages 15 – 69 and approximately five times the rate for children under age 15.

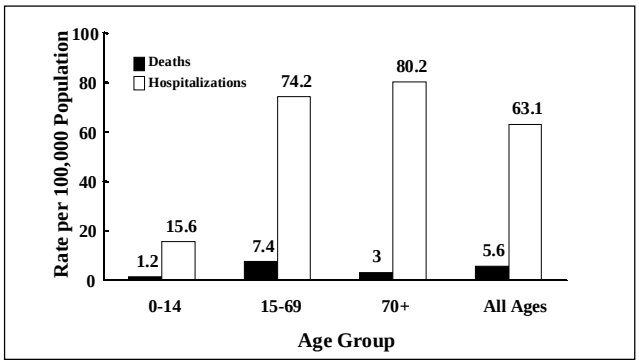

Figure 1. Death and Hospitalization Rates for Occupants in Motor Vehicle Crashes, by Age Group, Rhode Island, 1994 - 1998.

When analyzed by more detailed age groups, hospitalization rates for motor vehicle crashes exhibit a bimodal pattern; the highest rates are for person ages 15-19 and ages 20-24, but there is also a clear secondary peak at ages 80-84. (Figure 2) The age-distribution patterns for all occupants and for drivers only are similar, except that drivers form a somewhat smaller percentage of the injured among the age groups where hospitalization rates are highest.

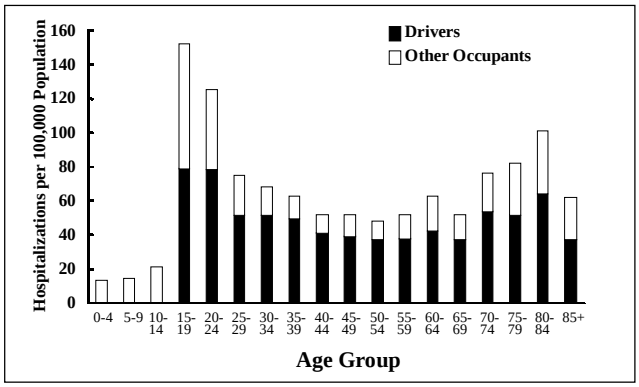

Figure 2. Hospitalization Rate for Occupants in Motor Vehicle Crashes, by Age Group and Position in Vehicle, Rhode Island, 1994 - 1998.

There are differences between younger and older drivers in the types of injurious motor vehicle crashes they are involved in. (Figure 3) A larger proportion of older drivers were injured in collisions with other motor vehicles and a smaller proportion injured in collisions with fixed objects either on or off the roadway (bridge abutments, guardrails, utility poles, etc.). Older drivers are also relatively less likely to be injured in non-collision crashes involving loss of control, such as vehicle roll-overs.

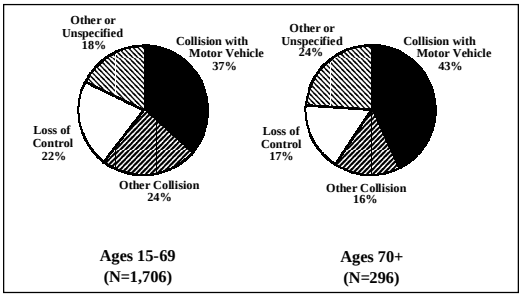

Figure 3. Distribution by Type of Motor Vehicle Crash for Hospitalizations of Drivers in Motor Vehicle Crashes, Rhode Island, 1994 - 1998.

Discussion. The increasing number of older drivers and their high rates of injury from motor vehicle crashes present a complex problem for public health and traffic safety. Traditional programs targeted at safety belt use and alcohol involvement will not yield further substantial changes among this group, as the elderly are already the most likely of all age groups to use safety belts and the least likely to drive after drinking.[2] There are other factors, more specific to this age group, that affect their driving safety, including increased reaction times, cognitive impairments, loss of physical strength, and increased vulnerability to trauma.

Over ten years ago, in September 1989, the Rhode Island Department of Elderly Affairs, with funding from the Department of Transportation, hosted a statewide conference on elderly driving entitled, "License to Drive - Is It Forever?" Subsequently, the Task Force on Older Drivers that was established at the conference presented a proposal including twenty-seven specific recommendations.[3] These recommendations covered the areas of (1) signing and road design, (2) education and training, (3) testing, (4) insurance and legal issues, and (5) alternative transportation. The breadth of this proposal reflected the complexity of the issues surrounding elderly drivers, and most of the recommendations presented then remain relevant a decade later.

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References

[1]National Center for Statistics and Analysis, National Highway Traffic Safety Administration. "Traffic Safety Facts 1998 - Older Population." (Undated) [Internet site: www/nhtsa.dot.gov/people/ncsa/pdf/Older98.pdf]

[2]Office of Health Statistics, Rhode Island Department of Health. Unpublished data from the 1997 Behavioral Risk Factor Surveillance System.

[3]Rhode Island Department of Elderly Affairs. "Report of the Task Force on Older Drivers." April 1991.

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